

No.1052A

LA7016

## **VCR Electronic Switch**

#### **Features**

- Wide input dynamic range
- Low distortion
- Good frequency characteristic

Maximum Ratings/T <sub>a</sub> =25°C				unit
Maximum supply voltage	VCC max		15	V
Allowable power dissipation	P <sub>d</sub> max	Ta≦65°C	300	mW
Operating Temperature	Topr	<del>-</del>	-20 to +65	°C
Storage temperature	T <sub>stg</sub>		-40 to +125	°C

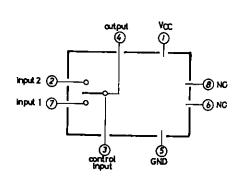
Operation Characteristics/T <sub>a</sub> =25°	C, V <sub>CC</sub> =12	v <sup>*</sup>	min	typ	max	unit
Circuit current	ĪD			9.3	12.5	mΑ
Total Harmonic distortion	THD	*R <sub>g</sub> =600Ω, 4.5V <sub>p-p</sub> , f=1kHz, R <sub>L</sub> =∞		0.007	0.1	%
Noise	en	*R <sub>g</sub> =600Ω, f=20Hz to 20kHz RL=∞		93	-80	dBs .
Crosstalk	ls1	*Input A: $R_g=50\Omega$ , f=3,58MHz $2V_{p-p}$ , Input B: $R_g=1k\Omega$	50	68		dB
Pedestal	$\Delta V_{De}$	d V3=2.2V to 3.0V	-100	0	+100	mV
Second harmonic		$R_q=50\Omega$ , f=1MHz, 4.0 $V_{p-p}$ , $R_L=\infty$	46	55		dB
Third harmonic		$R_g=50\Omega$ , f=1MHz, 4.0 $V_{p-p}$ , $R_L=\infty$	46	52		dB
Control, threshold voltage	V3s	5 FF -	2.2	2.6	3.0	V
Pin voltage (pin 4)	V4			6.9	6.9	V
Pin voltage (pin 7)	٧7	V <sub>3</sub> =2.2V		7.6		V
Pin voltage (pin 7)	٧7	V <sub>3</sub> =3.0V		7,6		V
Pin voltage (pin 2)	V <sub>2</sub>	V <sub>3</sub> =3.0V		7.6		V
Pin voltage (pin 2)	٧2	V <sub>3</sub> =2.2V		7.6		V

Note) \*: Test for input 1 and input 2.

For input 1 test, Vcont (pin 3 voltage) is 2.0V.

For input 2 test, Vcont is 3.0V.

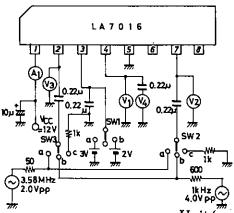
### **Equivalent Circuit Block Diagram**



# Package Dimensions (unit :mm)

SANYO: SIP8

### **Test Circuit**

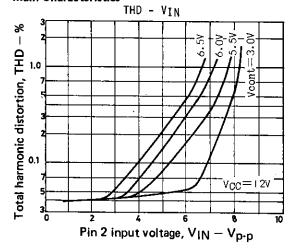


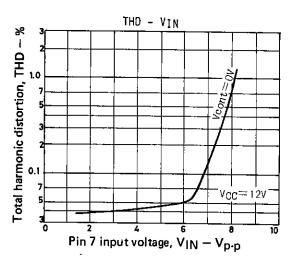
**Test Conditions** 

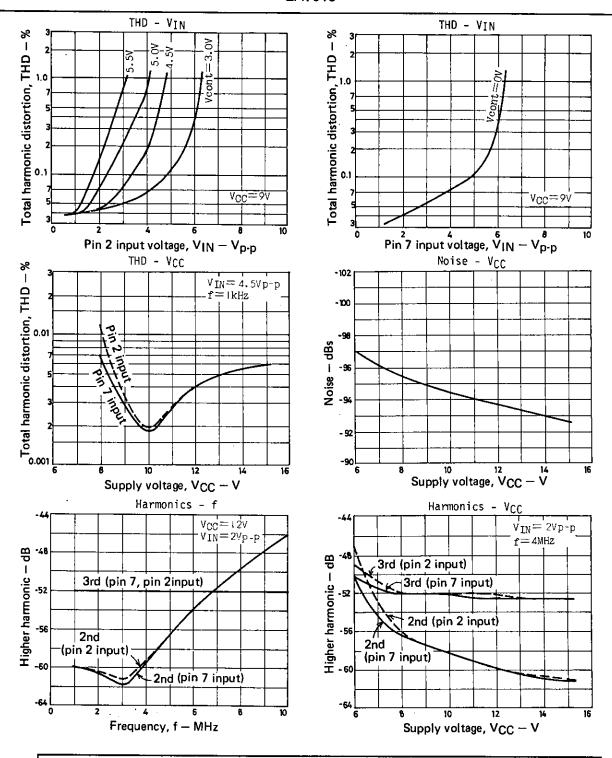
Unit (resistance:  $\Omega$ , capacitance: F)

Item	Symbol	SW mode			
		SWI	SW2	SW3	Test point
Circuit current	$I_{D}$	C	С	С	Aı
Distortion (1)	THD	b	ъ	С	V <sub>4</sub>
Distortion (2)	THD	a.	С	b	V <sub>4</sub>
Noise (1)	e <sub>n</sub>	Ъ	С	С	V <sub>4</sub>
Noise (2)	θn	a.	c	c	V <sub>4</sub>
Crosstalk (1)	Isl	b	С	a	V4
Crosstalk (2)	Is2	a	a.	С	V <sub>4</sub>
Pedestal	ΔV <sub>PED</sub>	a-b	С	С	VΙ
Pin voltage (pin 4)		b	c	С	Vi
Pin voltage (pin 7)		Ъ	С	С	V <sub>2</sub>
Pin voltage (pin 7)		a	¢.	С	V2
Pin voltage (pin 2)		a	c	С	٧3
Pin voltage (pin 2)		ь	c	С	٧3

### Main Characteristics







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